Gulf of Mexico Harmful Algal Bloom Bulletin

20 December 2004

National Ocean Service

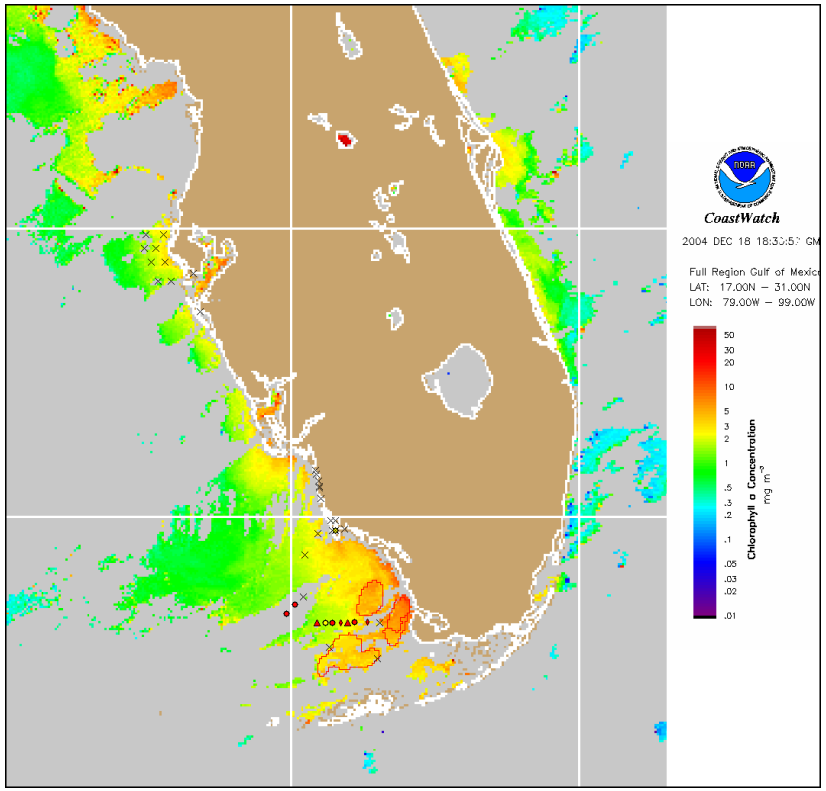
National Environmental Satellite, Data, and Information Service

Last bulletin: December 16, 2004

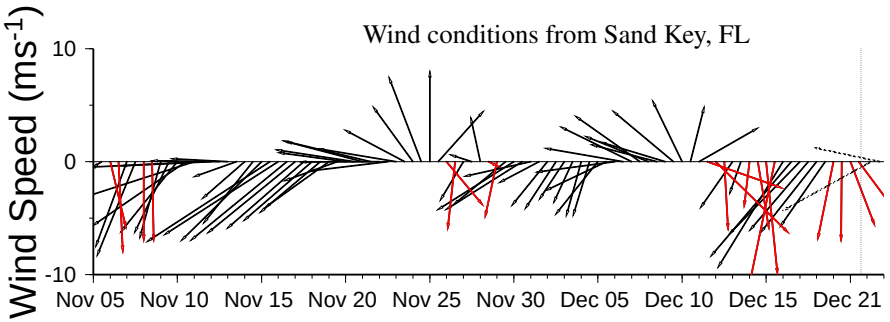
Conditions: A harmful algal bloom has been identified offshore southwest of Cape Sable. Impacts on shore may be moderate through tomorrow at the Keys.

Analysis: The previously identified bloom has moved south, the center point now looking to lie southwest of Cape Sable, in the vicinity of 25°1'N 81°39'W. Cloudy imagery since Thursday makes determination of the current extent difficult. Chlorophyll concentrations up to about 4μg/L are identifiable in areas not obscured by clouds. Low to medium concentrations of Karenia brevis were reported within this feature from December 13 to 18. This feature is the result of the union of the previously identified Karenia bloom with the Rhizosolenia bloom located north of the Keys. Sampling indicates medium concentrations of Rhizosolenia along its southern extent, with Karenia occupying most of the northern reaches. Elevated chlorophyll levels (>7μg/L) also exist alongshore to the north of Cape Sable. Very low concentrations of Karenia were found in this location last week. Continued strong north to northeast winds are likely to bring this offshore feature further towards the Keys. Moderate impacts on the coast can be expected through Tuesday night, including the transport of dead fish. Southerly winds later in the week should diminish these impacts.

-Stolz and Fenstermacher

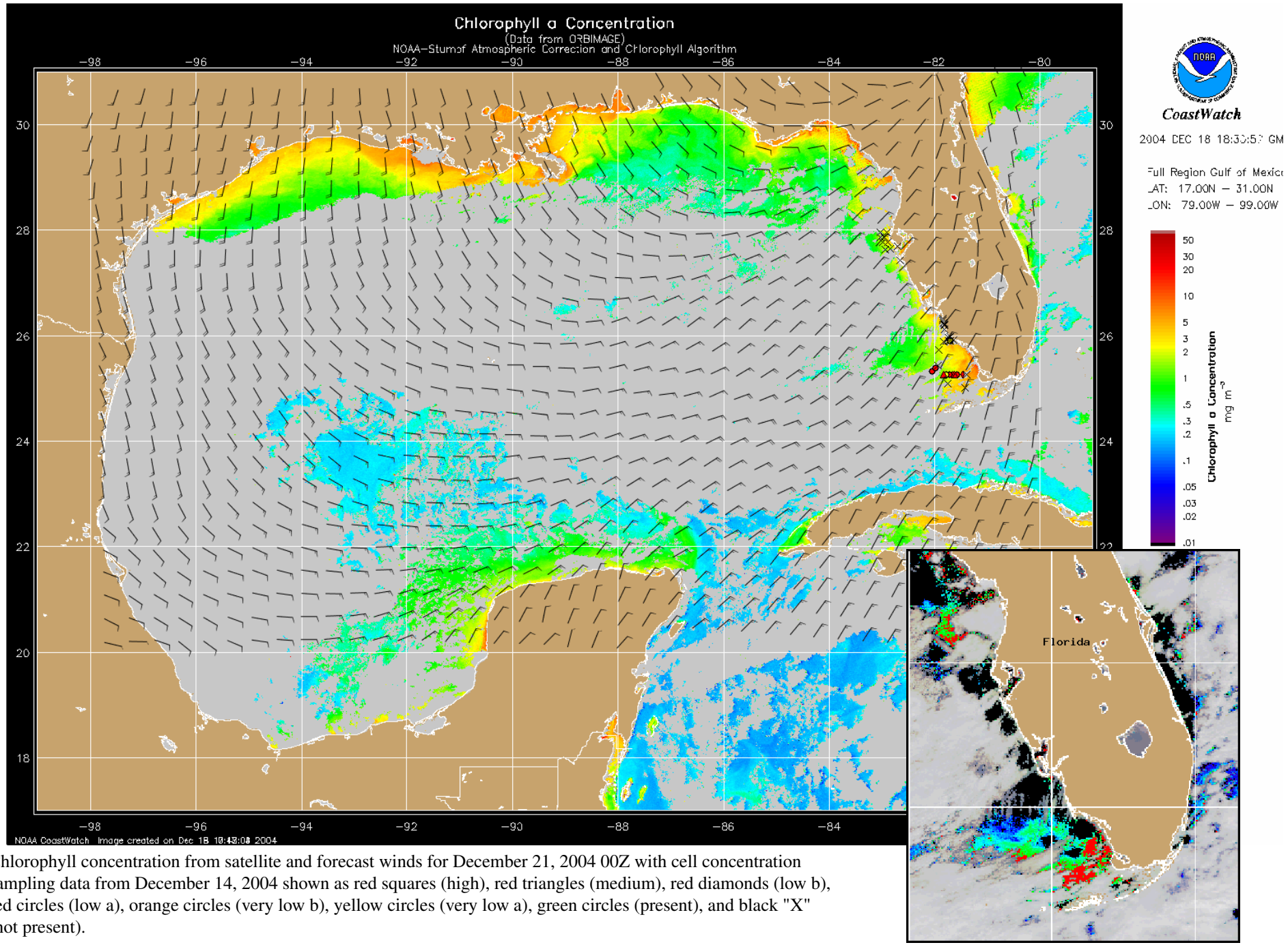


Chlorophyll concentration from satellite with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 14, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).



Wind speed and direction are averaged over 12 hours from measurements made on buoys. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

Strong north to northeasterlies through tonight. Northeast clocking around to the east Tuesday, then around to southeast by Tuesday night, and easing slightly. Winds south to southwest into Thursday, back to the north by Friday. Winds above 10 knots (5 m/s) all week, up to 20 knots (10 m/s) at times.



Chlorophyll concentration from satellite and forecast winds for December 21, 2004 00Z with cell concentration sampling data from December 14, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).

Blooms shown in red (see p. 1 analysis and image for interpretation)

Wind conditions from Venice Pier, FL